REMARKS

Applicants have carefully considered the November 17, 2006 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-23 were pending in this application. Claims 16-23 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b). Applicants respectfully request rejoinder of Group II (claims 16-23), which are directed to a method of vapor depositing a lubricant film, upon the allowance of any of the claims in Group I in accordance with the rejoinder provisions of M.P.E.P. §§ 821.04 and 806.05(e).

In response to the Office action, claim 1 has been amended and claims 10-12 have been cancelled. No new matter has been added. Support for the amendment is found in the originally filed disclosure and claims. Entry of the present amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1-15 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,613,151 (hereinafter the '151 Patent). Applicants respectfully request that the Examiner hold this rejection in abeyance until allowable subject matter is obtained in the present application.

Claims 1-13 and 15 were rejected under 35 U.S.C. § 103(a) for obviousness predicated upon Helling et al. (U.S. Pat. No. 5,882,415, hereinafter "Helling") in view of Dick et al. (U.S. Pat. No. 5,904,958, "Dick"). Applicants respectfully traverse the rejection for the reasons set forth below.

Claims 1-15 were rejected under 35 U.S.C. § 103(a) for obviousness predicated upon Hedgcoth (U.S. Pat. No. 6,036,824, hereinafter "Hedgcoth") in view of Dick et al. (U.S. Pat. No. 5,904,958, "Dick"). Applicants respectfully traverse the rejection for the reasons set forth below.

Independent claim 1, as amended, is directed to an apparatus comprising elements which are structured and positioned to vapor deposit a uniform thickness thin film of a lubricant on at least one surface of a disk-shaped substrate. The claimed apparatus comprises a chamber having an interior space; and a substrate loader/unloader. The claimed apparatus further comprises at least one elongated lubricant vapor source comprising a closed heated chamber which contains a liquid lubricant, the closed heated chamber fluidly communicating with at least a plurality of primary plugs for supplying a stream of lubricant vapor. The plurality of primary plugs form a pattern in the form of a linear array, a diagonal array or a rectangular array. Each of the plugs comprises a drilled hole and the drilled hole substantially extends the length of the plug's interior. The plugs positioned at an outer edge of the elongated lubricant vapor source have a smaller diameter drilled hole than the plugs positioned adjacent to a middle of the elongated lubricant vapor source. The claimed apparatus also comprises a substrate transporter/conveyor which continuously moves at least one said disk-shaped substrate past said stream of lubricant vapor from said at least one elongated lubricant vapor source for depositing on at least one surface thereof a uniform thickness thin film of lubricant.

The Examiner referred to FIGS. 2, 4 and 6 of the secondary reference to Dick for the construction of the plugs in an attempt to remedy the admitted deficiencies of the primary references to Helling and Hedgcoth. Applicants submit that the combination of Helling or Hedgcoth with Dick, fails to disclose or remotely suggest every limitation of independent claim 1 as amended.

Although Dick discloses adjustable bolts, Dick fails to teach or suggest that the bolts have different diameter drilled holes, much less that the pattern of the bolts has the smaller diameter drilled holes positioned at the outer edges of the elongated lubricant vapor source and larger diameter drilled holes positioned towards the middle of the elongated lubricant vapor source. Accordingly, the references alone, or in combination, fail to teach or suggest every limitation of independent claim 1. The rejections under 35 U.S.C. 103 are not legally viable for at least this reason.

As described in the present specification, the claimed invention relates to an apparatus for uniformly applying a thin film of a lubricant to substrate surfaces in a solventless manner. The invention has particular utility in the manufacture of magnetic or magneto-optical ("MO") data/information storage and retrieval media comprising a layer stack or laminate of a plurality of layers formed on a suitable disc-shaped substrate, wherein a thin lubricant topcoat is applied to the upper surface of the layer stack or laminate for improving tribological performance of the media when utilized with read/write transducers operating at very low flying heights (page 1 of the specification, lines 5 through 14). The present invention addresses and solves problems and difficulties in achieving uniform thickness lubricant thin film deposition by providing an inventive apparatus for vapor depositing a uniform thickness thin film of a lubricant on at least one surface of a disc-shaped substrate which contains a magnetic and/or MO data/information storage and retrieval media (page 5 of the specification, lines 10 through 18).

Moreover, the Examiner's attention is directed to the specification at page 9, lines 3-19. Each of the plugs comprises a drilled hole which extends substantially the length of the plug's interior. The vapor flow profile can be established by varying sizes of the drilled hole in each plug to guarantee an even distribution of lubricant vapor. The larger diameter drilled holes will

have a faster rate of vapor deposition than a smaller drilled hole. As disclosed in the specification, smaller holes are positioned at the outer edges of the lubricant vapor source, with larger holes positioned towards the middle of the lubricant vapor source. Such positioning helps prevent any potential buildup of vapor deposition near the edges of the disk-shaped substrate, and thereby ensures an even distribution of lubricant vapor on each side of the disk-shaped substrate. The plugs can be formed into a pattern such as a linear array, a diagonal array, or a rectangular array.

Applicants further submit that the Hedgcoth and Dick are not within the same field of endeavor, and that one of ordinary skill in the art would not have been realistically motivated to combine the references, as proposed by the Examiner. One skilled in the art confronted with the problem of Hedgcoth (continuous production from a direct current planar magnetron sputtering apparatus to mass produce magnetic thin film memory disks - col. 2, lines 13-17) would not look to Dick (evaporation of organic monomers at high temperatures to minimize the effect of thermal expansion upon cross-direction coating uniformity - col. 1, lines 50-54) to solve its problem, because Hedgcoth is not reasonably pertinent to the particular problem addressed by Dick and *vice versa*.

In view of the foregoing, Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a).

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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